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Installation & Operation User Guide

Product Installation & Operation User **Guide**

LED
Panel Lighting (2x2ft)

T-Bar
Bela
40W
45W
50W

GigaTera®
beyond the light

『Safety Precautions Installation』

This symbol is intended to remind the user the presence of actions and operation that may cause danger.
Please read instructions carefully and follow the instructions to avoid any danger.

This symbol is intended to represent precautions that the user should follow to prevent danger.

WARNING

Serious injury might result if the following precautions are not followed.

- The installation should be performed by certified workers under the relevant regulations of end user's country / region.
- Never modify or disassemble LED lighting arbitrarily because it can cause serious accidents.
- Never use any input power except the listed rated voltage. If not, it can cause serious accidents.

- Before installation, shut off the power supply and verify it is de-powered using a measuring instrument.
- The wiring should be insulated under end user's respective region's Electric Installations Standards.
- Do not install in a wet environment.

CAUTION

The user may be injured or there would be property damage if the instructions below are not followed.

- Do not forcefully pull on AC/DC lines when wiring up the lighting. (It causes the wires to snap.)
- Do not use this product for any purposes other than what's specified.
  The manufacturer or sellers are not responsible for breakdowns or accidents caused by its improper use.

- When connecting the wires, use proper connection terminals depending on the site of installation.
  Do not install in a wet environment.
- Make sure to ground fixture by contacting it to metals around it to prevent damage by static.
- The product may be damaged if static is not removed.
- During the operation, be careful not to disconnect the wires.
- Make sure the grounding is performed under Electricity Standards.
- Using it for any voltage other than specified can cause failure or fire.
- Do not use it in moist environment.
- Be mindful of proper ventilation of product.
- Improper installation or disassembly causes a deformation or breakdown of the product.
- Consider proper protection devices, such as circuit breakers, fuses, switches, etc. for safety precautions.
- Do not install in an enviroment with excessive vibration.
- Do not handle product with contaminated hands or gloves.
- In any event, do not store / install in a contaminated place.

Product Overview

1) Scope

This manual explains the composition, installation, and operation of the Bela LED recessed light panel.

2) Recessed LED Light Panel

The Bela LED recessed light panel is designed as a complete retrofit / new installation for any indoor application. Illuminance is controlled by provided IR Remote.

3) Description / Function

The Bela LED recessed light panel is the ideal retrofit solution for fluorescent lights in offices, meeting rooms, hospitals, seminar rooms, schools, and stores.

The Bela recessed light panel disperses a completely even light output.

The Bela is glare-free and up to 10 levels of luminance is controlled by the IR remote control or DMX512.

It composition of light materials allows ease of handling and installation.

Bela 2x2ft and has 3 models, 40W, 45W and 50W. Users are able to choose between 5 different color temperatures (3500K, 4000K, 5000K, 5700K and 6500K).

When fluorescent lights of 80W (FL20W x 4 lights) are replaced with Bela-40W, users are able to save 50% on energy cost and can expect lower maintenance costs due to its longer life span. (i.e., 50,000 hours).

Product Features

1) Environmental Forward

LED fixtures use an environment-friendly light source that doesn't contain mercury which is a harmful component of fluorescent lights.

2) Energy saving & Longevity

The light source of LEDs is a semiconductor device and it ensures reduced power consumption and longer life. GigaTera's fixtures add an extra energy incentive because it can control brightness depending on room conditions./ user preference.

3) Design

Its elegant design improves the aesthetics of any interior environment.

4) Lighting Control

Users can control the ON/OFF functions not only by using the IR remote control but also by using the DMX512 which enables dimming function as well.

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Checklist before Installation

1) The length between T bar and actual ceiling

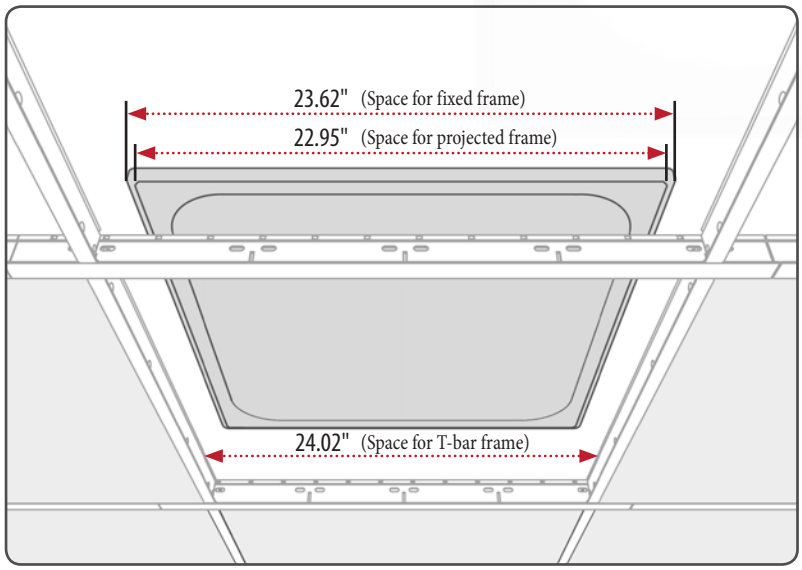
At least 3.94"

2) Size Specs

Please refer to the figure below.

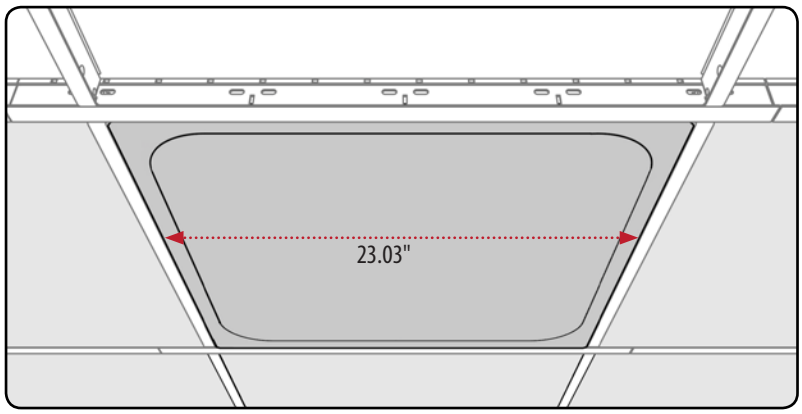
3) Others

Weight load capability of T bar framework should be verified before installing the Bela recessed led light panel.



4) When the installation is complete

Recessed light panel is fixed hanging on the T bar frame of a ceiling.



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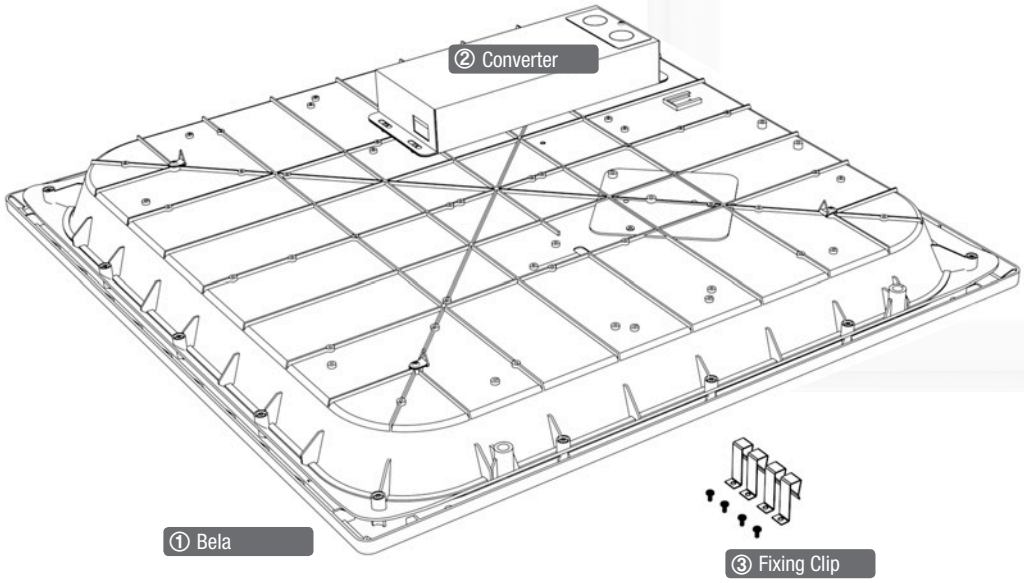
Package (1-10V)



Detail Description

No	Item	Purpose
①	**Bela**	Recessed LED Light Panel
②	**Converter**	Power Supply Unit
③	**Fixing Clip**	Clips for fixing T-bar frame

Group Dimming

To set up the 1-10V wall dimming function, minor electrical wiring would have to be done using an AWG #20 wire. Attach one end of the wires to their corresponding (+, -) terminals located on the products's converter terminal box.

(The 1-10V dimming Bela recessed LED light panel version does not come standard with a group dimming cable.)

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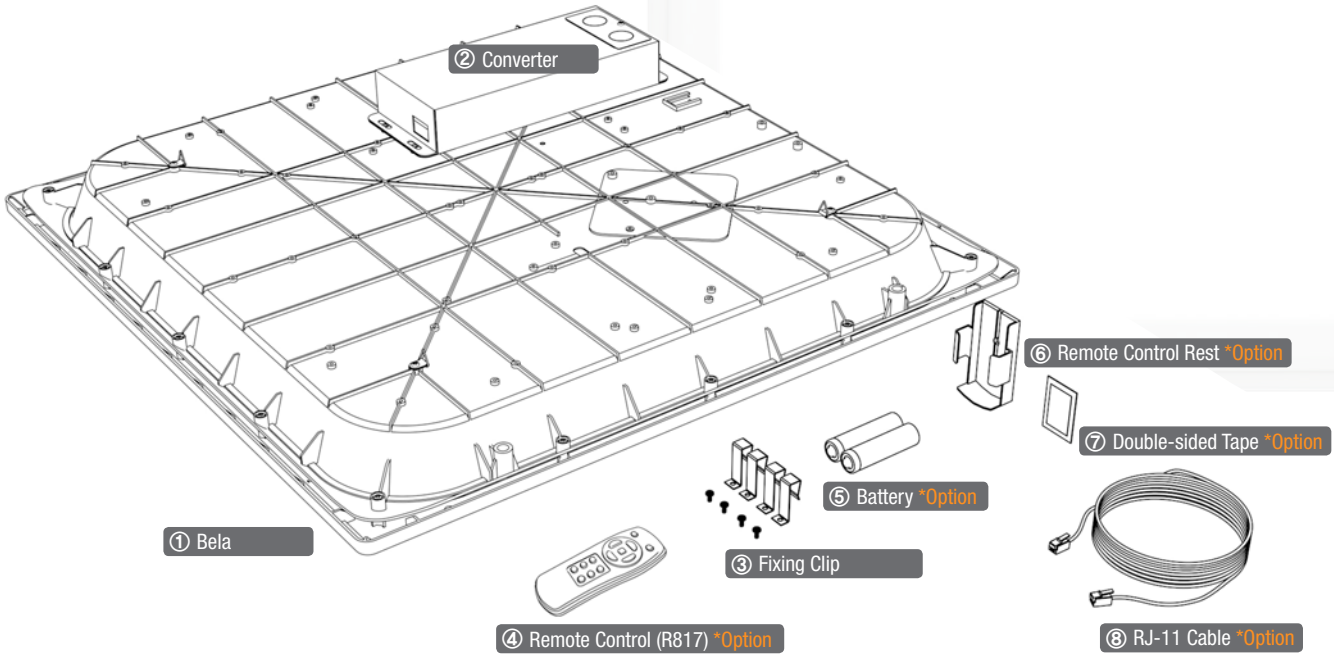
Package (DMX512/IR)



Detail Description

No	Item	Purpose
①	**Bela**	Recessed LED Light Panel
②	**Converter**	Power Supply Unit
③	**Fixing Clip**	Clips for fixing T-bar frame
④	**Remote Control (R817)**	IR remote control for brightness control (*Option)
⑤	**Battery**	Battery for the remote control (*Option)
⑥	**Remote Control Rest**	Remote control rest (for wall mounting) (*Option)
⑦	**Double-sided Tape**	For mounting the remote control rest on the wall (*Option)
⑧	**RJ-11 Cable**	Communication cable for master/slave operation (*Option)

Group Dimming

You will need RJ-11 cable for IR or DMX512 group dimming.
The RJ-11 cable & remote control is purchased separately from manufacturer.

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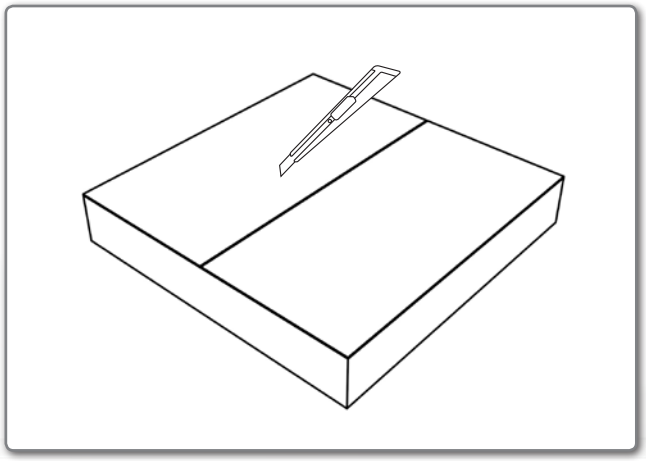
Product Removal

STEP. 01

Place the box on a flat surface and cut the sealed flaps with a cutter.

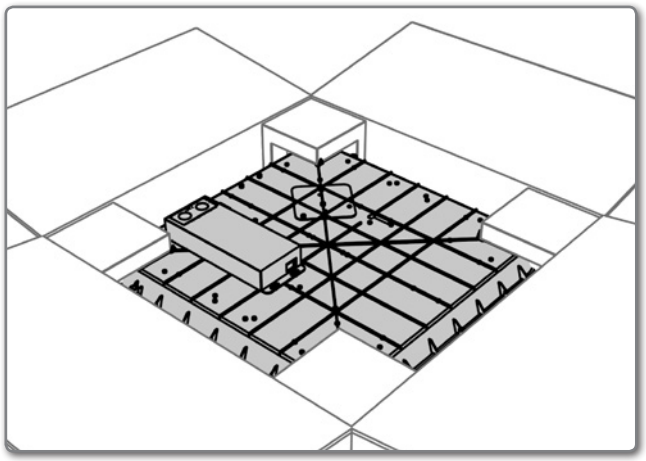
At this time, be careful not to damage the product by penetrating too deeply with cutting instrument.



STEP. 02

Open the box widely to take out the product easily.

Remove packing materials from each corner carefully.

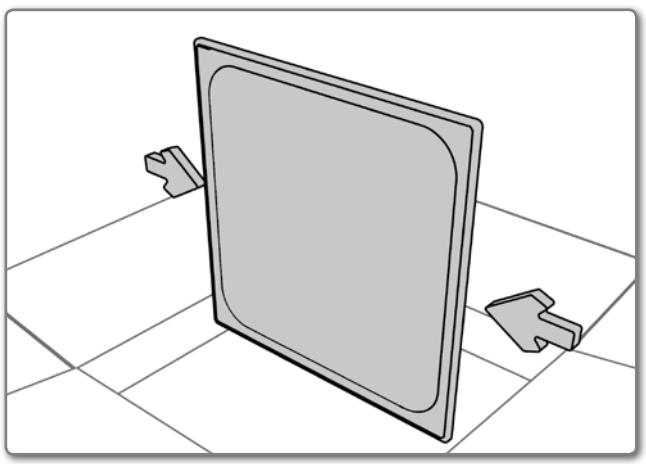


STEP. 03

Grip fixture by the areas shown, and place it on a work table.

Before putting the product on the table, we recommend spreading a soft cloth first to prevent damage to the panel.

Fixing clips should be mounted on the back of the product.



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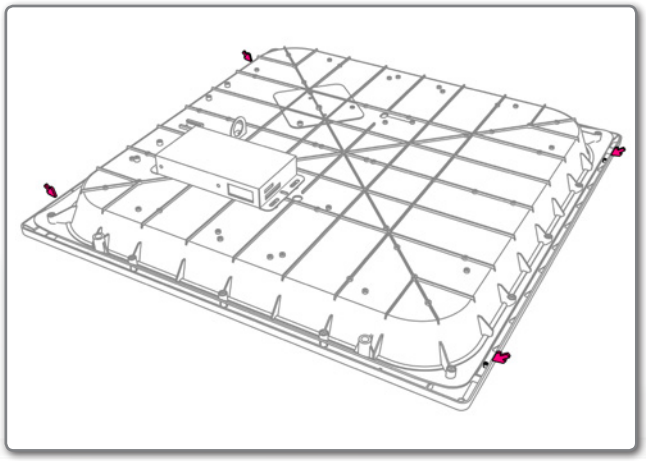
Fastening Clips

STEP. 04

First, fasten the safety clips on the back of the product.

On the 4 corners of the recessed light panel, there are assigned holes for safety clips to be installed as shown in the figure.

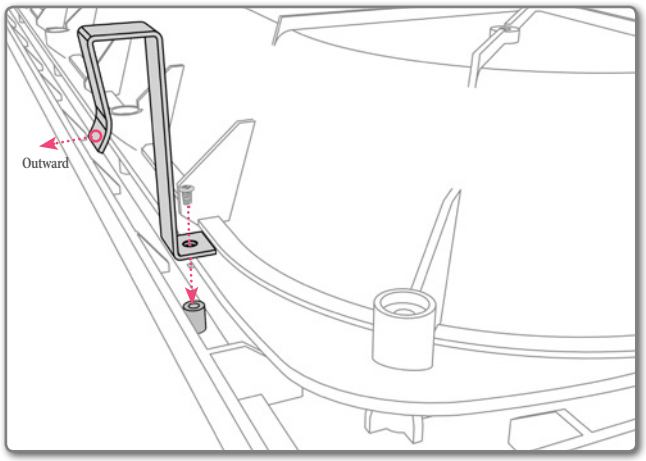


STEP. 05

Mount fixing clips onto the assigned holes with the screws provided as shown in the figure.

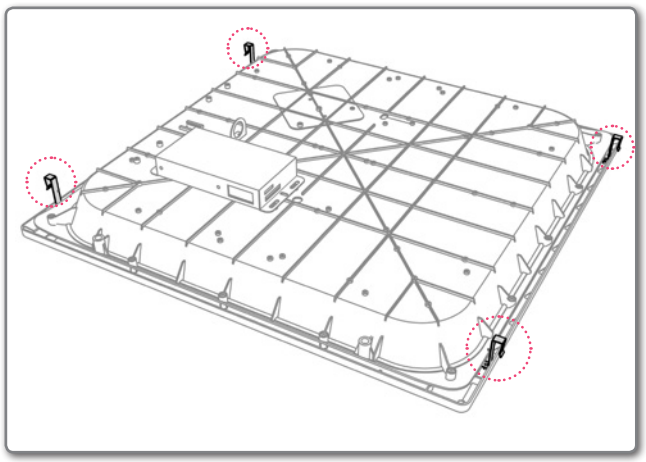
Mount fixing clips on the 4 corners in the same way.

Please note that the curved side should be facing outward.



STEP. 06

The recessed light panel is ready for installation with the 4 safety clips installed as shown in the figure.



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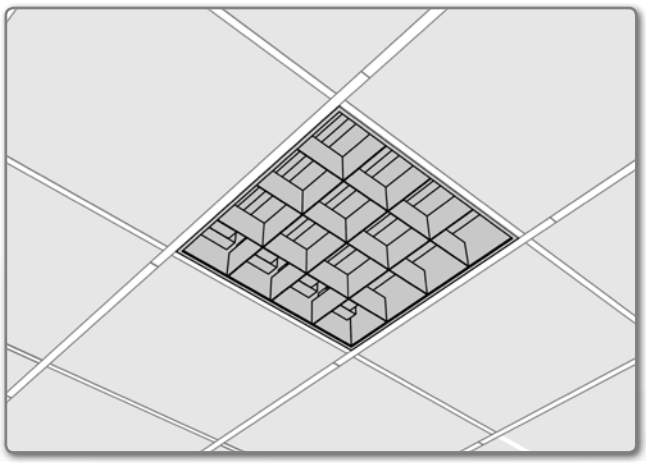
Remove the existing light

STEP. 07

The existing light should be detached from electrical framework.



STEP. 08

Since the existing light is also hung on the T bar frame, lift it in the direction shown in the figure.

STEP. 09

Rotate the existing light in a diagonal direction so it can be taken out of the T bar frame.

Make sure all wires and cables are, disconnected.

For safety, this should be per- formed with the power switch off.

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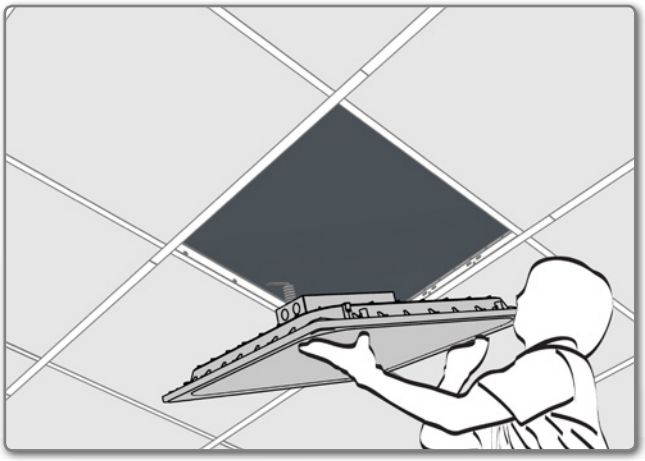
Install Light Panel

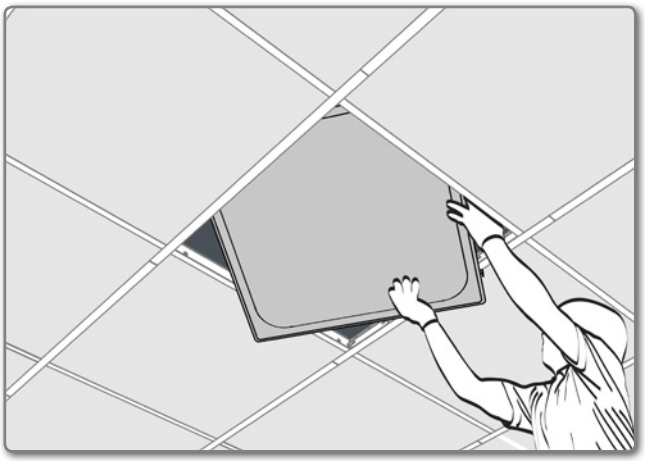
STEP. 10

Lift Bela carefully by holding as shown in the figure.



STEP. 11

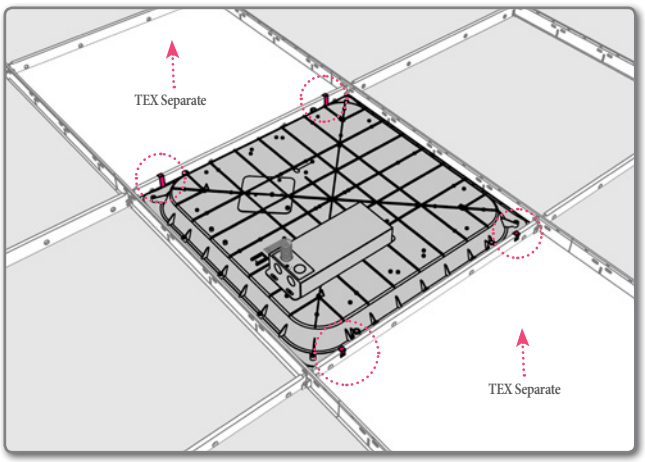
Since the size of recessed light panel is larger than the retrofit area, position it inside the ceiling by rotating it slightly in a diagonal direction.



STEP. 12

Properly align and fasten safety clips to the T bar frame.

To do so, temporary removal of neighboring ceiling panels is recommended.



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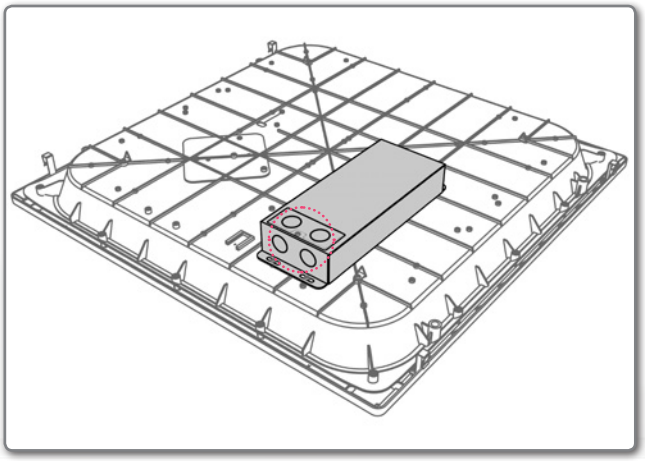
Connect AC Power

STEP. 13

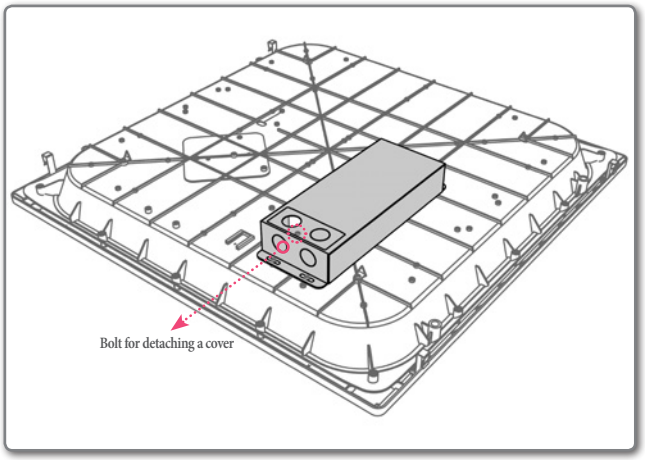
Upon removal from packaging, the SMPS should be completely housed as shown in diagram.



STEP. 14

Installer has options for SMPS access as shown in the figure.

The various opening caps are designed to be detached after loosening holders with a small amount of force.

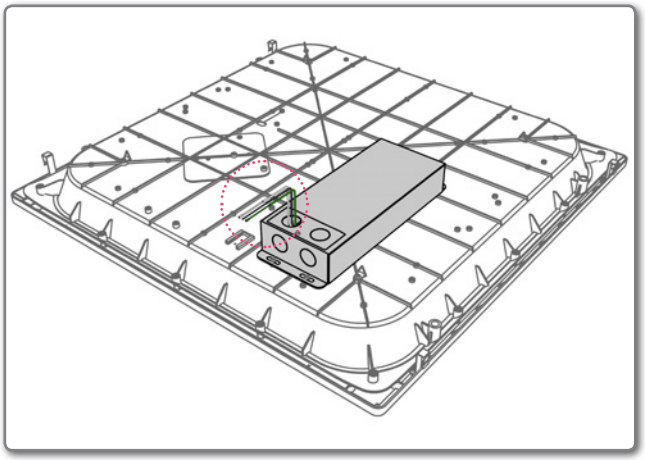


STEP. 15

After detaching the appropriate cap from the cover, pull out AC cables from the SMPS housing.

Below is the breakdown of the colored wiring :

- **Black(Brown) : AC (L)**
- **White(Blue) : AC (N)**
- **Green(Yellow) : F.G**



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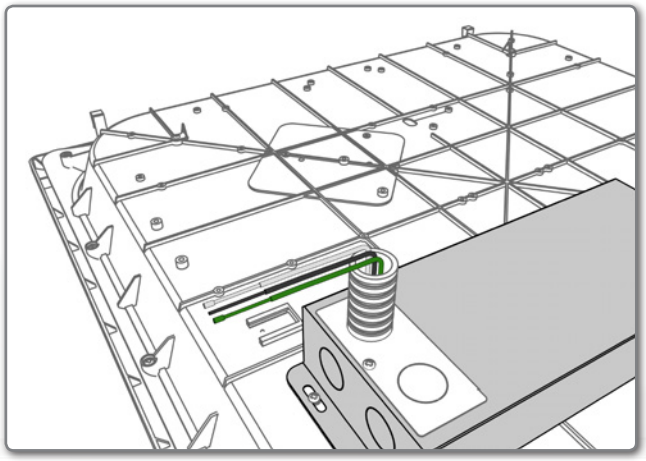
Connect AC Power

STEP. 16

A wire cover may be installed to protect cables as shown in the figure.

The wire cover is not included in the package and should be purchased separately if needed.

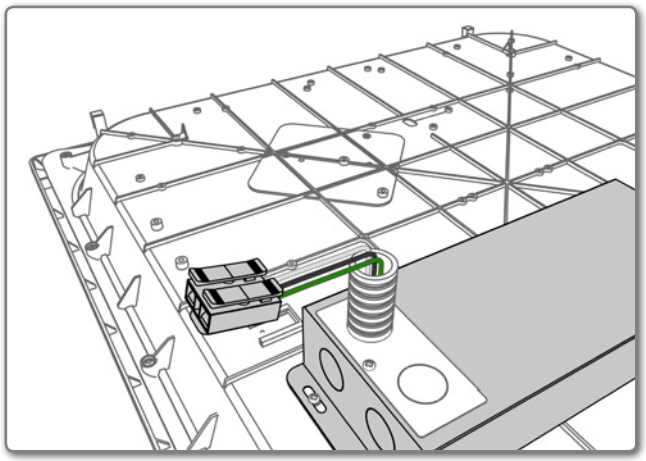


STEP. 17

Connect AC line first to the power connector.

The figure on the right is only an example.
The connection status of the power supply cable may vary depending on the condition of site.

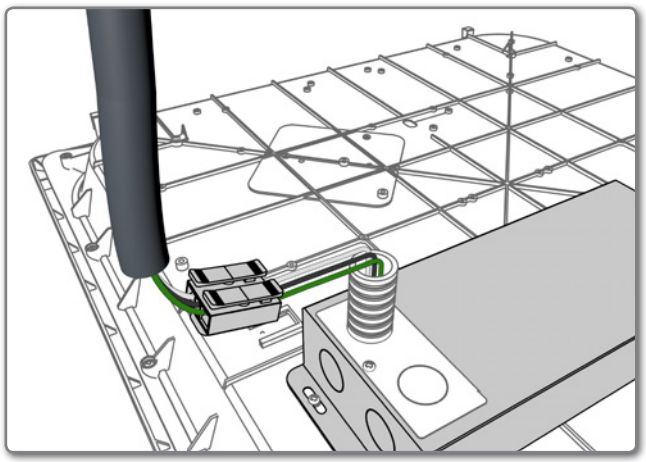
The power connector is not included in the package and should be purchased separately if needed.



STEP. 18

Lastly, test the fixture after connecting the power connector to the main power supply.

The power connector is not included in the package and should be purchased separately if needed.



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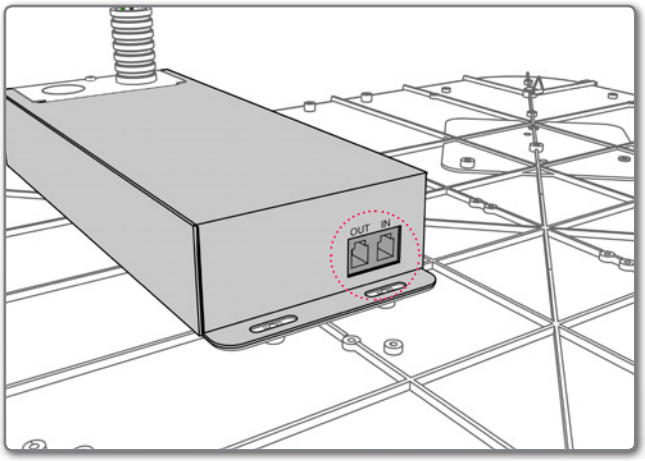
Connect Communication Cable

STEP. 19

If there are connection ports for RJ-11 cables in the SMPS, the product has a master / slave function.

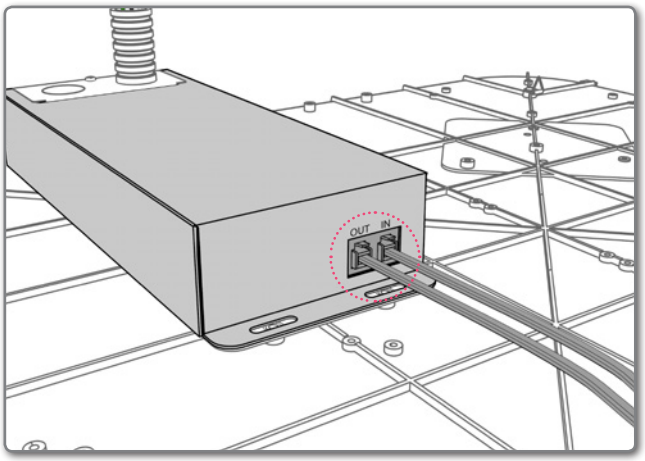
The recessed LED light panel can be connected to up to 254 fixtures, with the whole group being able to be controlled by one master fixture.



STEP. 20

Connect master unit to slave unit by using provided RJ-11 cable.
Insert the RJ-11 cable to the output terminal of the SMPS, and connect the other end to the input terminal of first slave unit.
Repeat as necessary.

- **The right port**
  : Input terminal
- **The left port**
  : Output terminal



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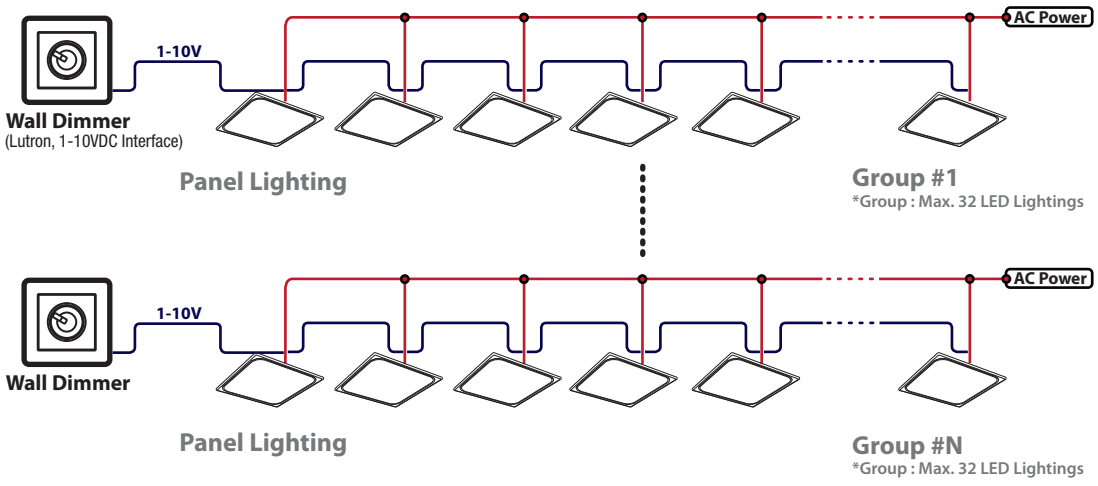
Schematic & Dimming

1-10V Converter

1-10V Control LED Panel Lighting



In the case of implementing a 1-10V dimming control system, it is advised that the wall dimmer (model/manufacturer) shown in the top diagram is used.

The maximum quantity at the time of group control is according to dimmer switch and acturator supply wattage.

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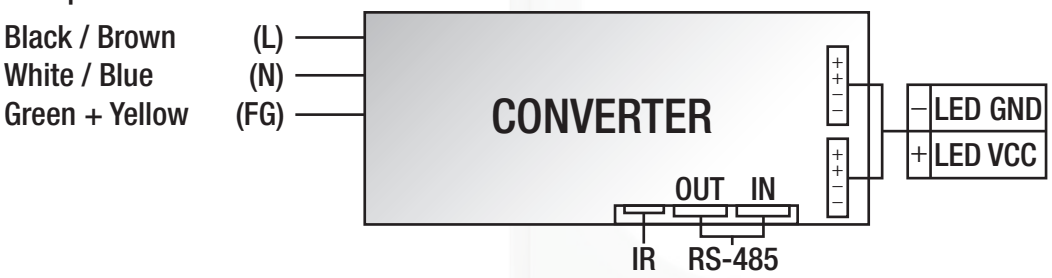
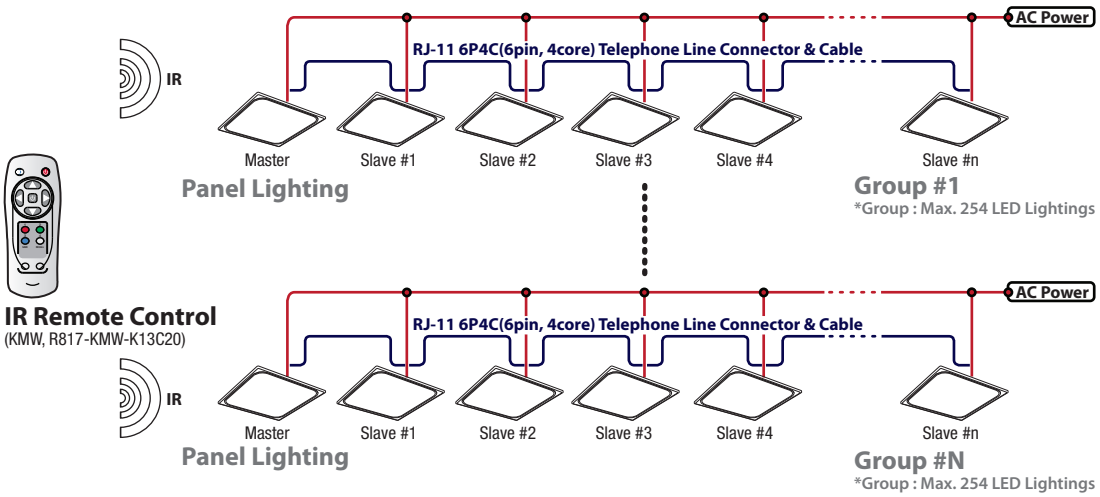
Schematic & Dimming

IR Converter



IR Remote Control (Group Dimming) LED Panel Lighting



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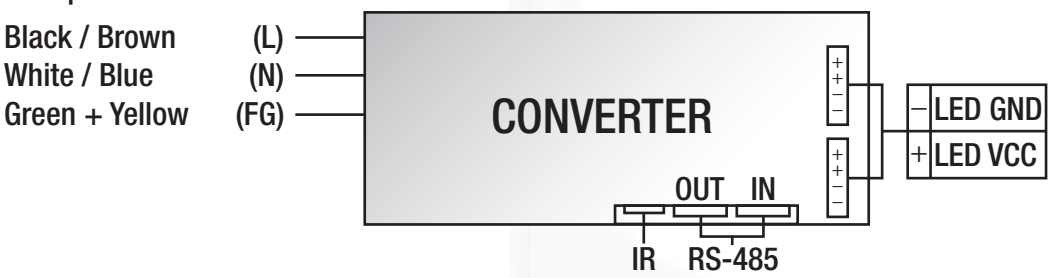
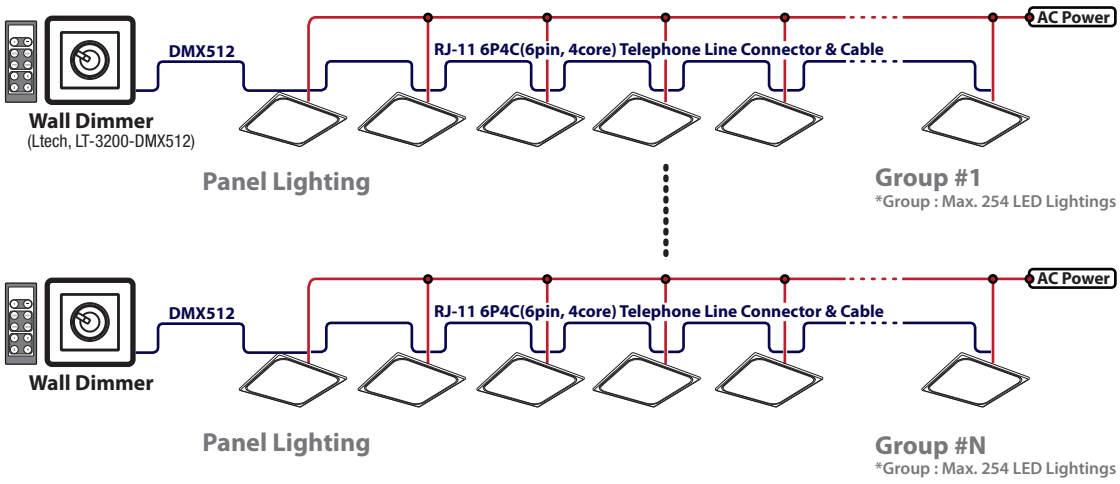
Schematic & Dimming

DMX-512 Converter



DMX512 Control LED Panel Lighting



In the case of implementing a DMX512 dimming control system, it is advised that the wall dimmer(model/manufacturer) shown in the top diagram is used.

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IR Group Dimming Setup

1) Set the master

STEP. 1 Press On/Off repeatedly (Minimum 3 times). Set fixture to Off mode.

STEP. 2 Press Button1(Red) for 3 seconds.The fixture is“Ready for setting” and will blink.

STEP. 3 Press Button3(Blue) then press the Recall Button alternately 3 times.

STEP. 4 Press Save button.The fixture will blink once informing the user that the setting is complete.

* Note
All Bela recessed LED light panels are factory set to the Slave mode.
Assign master functions as necessary.

2) Release the master

STEP. 1 Press On/Off repeatedly (Minimum 3 times). Set fixture to Off mode.

STEP. 2 Press Button1(Red) for 3 seconds.The fixture is“Ready for setting” and will blink.

STEP. 3 Press Recall button once.

STEP. 4 Press Save button.The fixture will blink once informing the user that the setting is complete.

3) Control the IR brightness

The luminosity is increased/decreased up to 10 levels by pressing the Up/Down button.

Press Left/Right button to set fixture to either min/max luminosity

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GigaTera® beyond the light

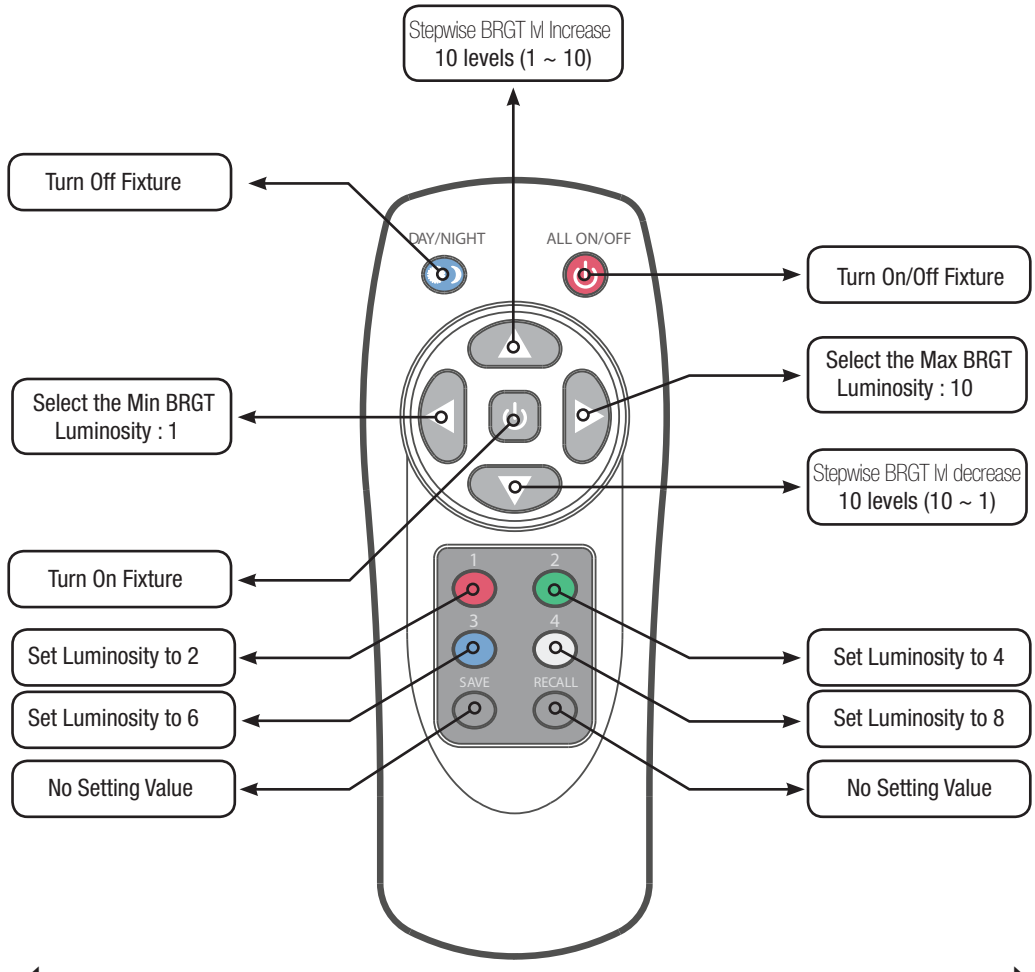
Bela Recessed LED Light Panel Remote Controller User Guide

Note

1) The brightness can be set from 1 (min) to 10 (max), a total of 10 levels.
2) The brightness of Button 1, 2, 3, and 4 are not allowed to be changed arbitrarily because they are given values.
3) A 10 sec. rest period is recommended after repeated on/off modes.
4) 5 meters (16.4ft) is the recommended IR remote parameters.
5) When operating the IR remote, it is recommended to operate near the master fixture. If not, other unwanted fixtures may be activated at the same time.
6) Press and hold On/ Off button for 1 sec. to allow intended function.

How to use a Remote Control

Model : R817



⇦ **Luminosity Level : 1 - more Dimmer**

⇨ **Luminosity Level : 10 - more Brighter**

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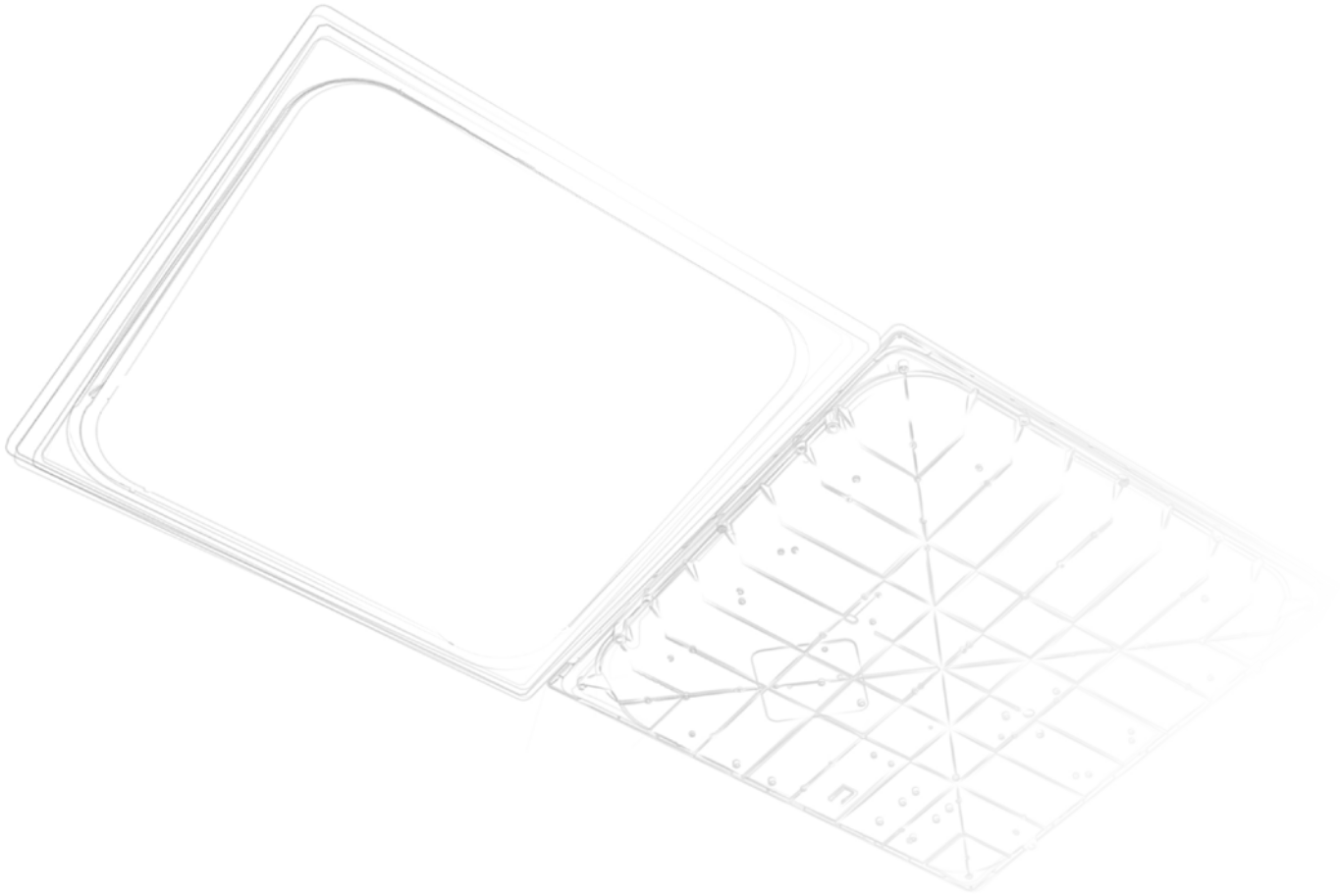
KMW
RF & Microwave Products



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